

**A New Species of Spoon-winged Lacewing (family Nemopteridae, order Neuroptera planipennia) from Western Australia, by R. J. Tillyard, M.A., Sc.D. (Cantab), D.Sc. (Sydney), F.R.S., F.N.Z.Inst., F.L.S., F.G.S., F.E.S., C.M.Z.S., Chief of the Biological Department, Cawthron Institute, Nelson, N.Z.**

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The family Nemopteridae includes the Spoon-winged Lacewings (sub-family Nemopterinae) and the Thread-winged Lacewings (sub-family Crocinae) which are the most remarkable insects in the whole Order Neuroptera. They range from the Mediterranean Region down to South Africa and across to India, with an extension to Western Australia and across to the dry inland parts of Queensland. Only a single species, *Croce attenuata* Frogg., is so far known to reach to Queensland; but Western Australia possesses species of both sub-families, the Nemopterinae being represented there by the fine species *Chasmoptera hutti* Westwood, found around Perth and Guildford.

The Spoon-winged lacewings have their hindwings of most extraordinary form. The basal portion is narrowed and lengthened into a slender stalk provided with only three main veins, Sc., R. and M. Distally, this stalk widens out into an irregularly dilated area with oblique lateral veins on either side; at some point within this area, Rs comes off from R, being marked by a stout oblique vein, and junctions with M, continuing straight on below R<sub>1</sub>. The dilatation is usually constricted near the middle so as to form two distinct lobes of more or less irregular form, and the narrow piece between them is generally more or less twisted round upon itself, so that the two expanded portions do not lie in the same plane.

A magnificent new species of the genus *Chasmoptera*, discovered at Cunderdin, W.A., has been sent me for description through the kindness of Mr. L. Glaucert, Biologist of W.A. Museum, Perth. It is distinguished from *Ch. hutti* Wwd., by its much larger size, paler colouration, and particularly by the immense length of the

hindwings, which measure 40 mm. as against about 25 mm. for *Ch. lutti*; this latter species, however, has larger dilatations. The unique specimen of the new species is almost complete, but its antennae and portions of its legs are missing; the hindwings have been broken off level with the end of the abdomen and again at the constrictions between the two expanded portions, the apical part of one of them being absent. The specimen is mounted on its side, on cardboard, with the hindwings glued down in line with the abdomen; in order to save space in figuring, the distal portion has been figured as if cut off and placed between forewing and stalk of hind. In gluing down the middle broken portions, these parts have evidently become turned over, as a careful examination of the venation shows that the apparently anterior portion of the first dilatation contains the veins M and Rs, while the apparently posterior portion contains Sc. This part has, however, been left as mounted in the figure, the veins being labelled. The amount of twisting between the two lobes cannot be stated, owing to the break at the constriction and the flattening down of the lobes when mounted.

As this wonderful insect is probably attracted by light, further specimens ought to be obtained if a careful look-out were kept for it in and around Cunderdin. Unfortunately the date of capture is not given.

***Chasmoptera superba* n.sp.**

(FIG. 1.)

*Total length of body* 16.5 mm.; *forewing* 22 mm., *hindwing* 40 mm.

*Head* black above; *rostrum* black with creamy patch at base; *eyes* grey; *ocelli* prominent; basal segment of *antenna* black, (rest missing); *genae* and sides of *rostrum* creamy; *palpi* blackish.

*Thorax* black above, creamy on sides; spiracles and lateral suture of mesothorax black; breast greyish. *Legs* pale testaceous, with black hairs; tibiae brownish above; tarsi five-segmented, seg. 1 very long; segs. 2-4 very short; seg. 5 as long as 2-4 taken together; *claws* large, curved, black (distal portions of middle and hind legs missing).

*Wings*.—*Forewing* hyaline except for a tiny patch of fuscous at beginning of pterostigma above the distal fusion of Sc and  $R_1$ . Veins mostly black, but Sc, R,  $R_1$ , stalk of  $Cu_1$ , short basal piece of  $Cu_2$ , 1A, 2A and basal portion of posterior margin are much paler, as are also the following cross-veins:—first five and anterior parts of next three below R from base outwards; first three between M and  $Cu_1$ ; the three between stem of  $Cu_1$  and  $Cu_2$ ; first two between 1A and 2A or margin. Costal veinlets 22 in number. After fusing distally, Sc and  $R_1$  run obliquely to a little below apex, leaving

a rather wide pterostigmatic area above them.  $R_s$  has four descending branches,  $Cu_1a$  a five;  $Cu_1b$  has two branches. Below  $Cu_2+1A$  is a single series of eleven veinlets.

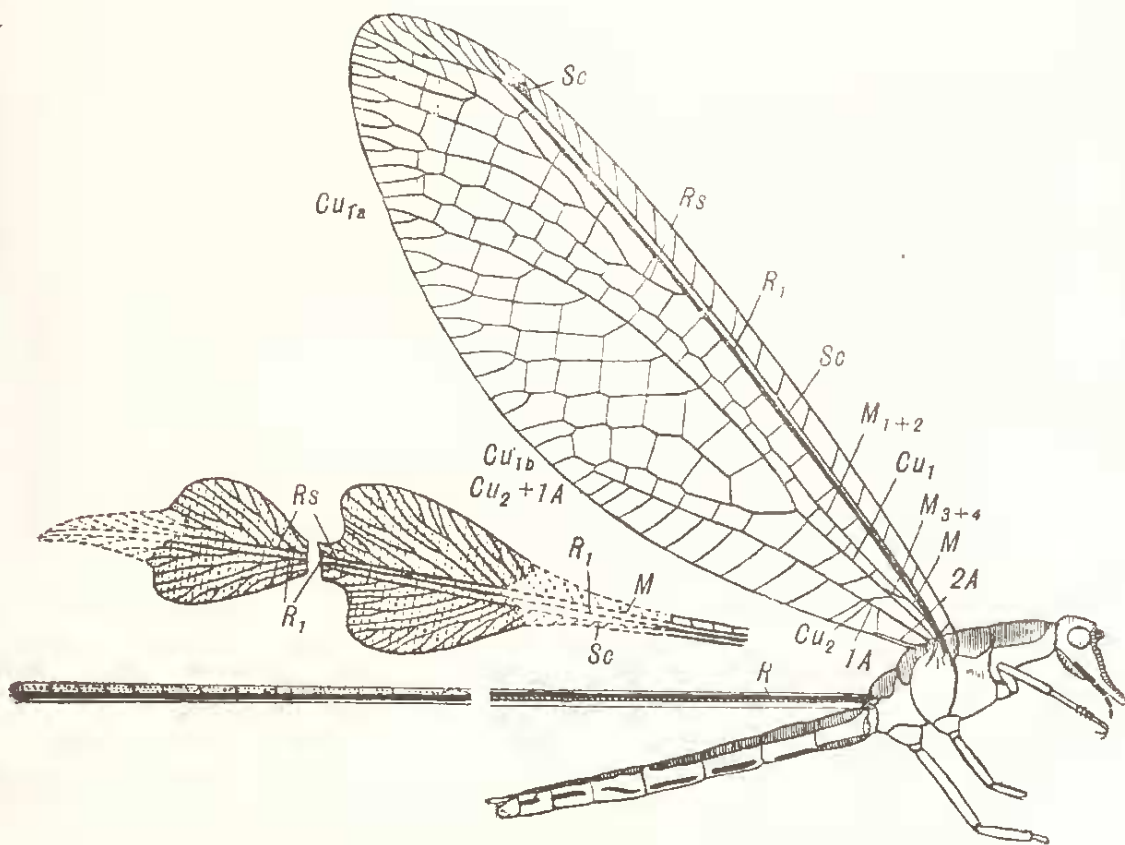


FIG. 1.—*Chasmoptera superba* n.sp., male lateral view (forewing 22 mm.). Distal portion of hindwing detached and placed between forewing and stalk of hind. The actual breaks in hindwing are shown at level of end of abdomen and also between the two dilatations; the portion including first dilatation has been mounted with anterior and posterior margins reversed and is so shown in figure. 1A, 2A, first and second anals;  $Cu_1$ , first cubitus, with its branches  $Cu_1a$ ,  $Cu_1b$ ;  $Cu_2$ , second cubitus; M, media, with its branches  $M_{1+2}$ ,  $M_{3+4}$ ; in forewing, the former continues free, but the latter fuses with  $Cu_1$ ; R, radius;  $R_1$ , its main stem;  $R_s$ , radial sector; Sc, subcosta. Creamy portions of hindwing indicated by dotted lines.

*Hindwing* excessively long (40mm.) and slender, the stalk occupying the first 26 mm. Basal part for 10 mm. hyaline with black veins; for the next 12 mm. the membrane is blackish; distal part of stalk and a sagittal portion of the base of the first dilatation creamy (marked in text-fig. 1 by dotted lines). Main portions of both dilatations dark fuscous with black veins, and shaped as in text, fig. 1; apex pointed, slightly nodding, pale creamy (indicated by dotted lines in text-fig. 1).

*Abdomen* slender, cylindrical; colour black above, with sutures finely outlined in creamy; sides pale orange, underside creamy; segs. 2-8 with elongated latero-ventral band of black, interrupted between the segments (text-fig. 1); seg. 9 creamy with black in suture.

*Appendages* 1-2 mm., very hairy, forcipate, creamy with black band above.

*Habitat*—Cunderdin, W.A.

*Types*—*Holotype male* (unique), Specimen No. 1386, in W.A. Museum Collection, Perth. Label:—Cunderdin, W.A., 1914 (name of collector and month of capture not given).

Easily distinguished from *Ch. hutti* Wwd. by its much larger size, paler colouration, and, in particular, by the very long hindwings with much smaller dilatations than on *Ch. hutti*; in the latter, the hindwings are entirely blackish except for a touch of creamy at apex and along midrib of first dilatation; appendages of male of *Ch. hutti* are about half as long as in the new species.